BRUHATH BENGALURU MAHANAGARA PALIKE

QUALITY CONTROL TEST REPORT

Name of Work: Restoration and Improvements of roads at Hesaraghatta main road, G Ramaiah layout, Sai Archade layout, Vijaya Bank Layout, Adityanagara Phase-02 and surrounding areas in Ward No.03 of Yelahanka New town Sub Division (Package No-09), BBMP, Bangalore.

Civil Aim Consultants & Engineers

(Buildings Geo-Test & Highway Materials Testing Laboratory)

An ISO 9001:2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

No.01, Satvika Nilaya,Opp.Widia Poorna Prajna School,Ramaiah Layout Nagasandra Bengaluru -560073.

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

QC ABSTRACT

Nameof Work:Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division,

Sl. No.	Item	Quantity As Per BOQ	Required No's of testes	Actual No's of testes	Testes	Frequency
1	1:4:8	41.80Cum	1	1	Cement Sand,	One Test Per Lot
2	Steel	4.53 Tonne	1	1	-	-
3	M20	88.43 Cum	5	5	Concrete Cube Compressive Strength	-
4	M15	13.02 Cum	2	2	Concrete Cube Compressive Strength	-
5	Slab (100mm)	583.02 Sqm	1	1	Concrete Core Compressive Strength	-
6	Kerbstones	1442.44 Nos	1	1	Concrete Core Compressive Strength	-
7	Paver Blocks (75mm)	350.61 Sqm	1	1	Concrete Core Compressive Strength	-
8	DLC	275.12 Cum	2	2	-	-
9	M30	275.12 Cum	9	9	Concrete Cube Compressive Strength	-
10	GSB	3248 Cum	17	17	-	-
11	WMM	2659.76 Cum	-	-	-	-
		Gradation	27	27	-	-
		AIV	14	14	-	-
		Shape Test	14	14	-	-
		Atterberg Limits	27	27	-	-
12	DBM	664.96 Cum	-	-	-	-
		Quality of Binder	1	1	-	-
		AIV	1	1	-	-
		Shape Test	1	1	-	-
		Gradation	1	1	-	-
		Specific Gravity	1	1	-	-
		Stability of Mix	14	14	-	-
		Bitumen content	14	14	-	-

CIVIL AIM CONSULTANTS & ENGINEERS

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

13	BC	488.73 Cum	-	-	-	-
		Quality of Binder	1	1	-	-
		AIV	1	1	-	-
		Shape Test	1	1	-	-
		Gradation	1	1	-	-
		Specific Gravity	1	1	-	-
		Stability of Mix	10	10	-	-
		Bitumen content	10	10	-	-

Cubes

0-5 Cum	1Set
6-15 Cum	2Set
16-30 Cum	3Set
31-50 Cum	4Set

Add 1set for extra 50Cum

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ.
ಆರ್.ಆರ್.ನಗರ ವಲಯ, ಬೆಂಗಳೂರು-106

CIVIL AIM CONSULTANTS & ENGINEERS

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 10.06.2022

TEST REPORT

CLIENT	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	:	**Sri. K Venkatraju,** Contractor, Bangalore.
NAME OF THE WORK	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
SAMPLE ID	:	Cement (Zuari OPC 53 Grade)
DATE OF MANUFACTURE		May - 2022
DATE OF TESTING		08.06.2022 to 10.06.2022
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269-2015
1	a) Initial Setting Time	IS-4031 (Part -5)	120 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	335 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	-

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.
⇒ The results indicated above are based on the tests carried out on the samples collected at the site.
⇒ Any Query regarding this report must be reported within 30days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date : 10.06.2022

TEST REPORT ON FINE AGGREGATES (SAND)
IS 2116-1980

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Date of Testing : 10.06.2022

Material : Sand - Masonry Total wt. of aggregates in gms = **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits as per IS 2116-1980
4.75	0	0.00	0.00	100.0	100
2.36	13	1.30	1.30	98.7	90-100
1.18	35	3.50	4.80	95.2	70-100
600 Micron	89	8.90	13.70	86.3	40-100
300 Micron	245	24.50	38.20	61.8	5-70
150 Micron	480	48.00	86.20	13.8	0-15

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
naiah Layout, Nagasandra, Bangalore - 560 073.
: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 20.06.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Sample ID : Cement Concrete for Raft

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.06.2022	20.06.2022	8.169	335.2	14.90
2	13.06.2022	20.06.2022	8.184	346.5	15.40
3	13.06.2022	20.06.2022	8.146	352.8	15.68

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬ.ಬ.ಮ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 20.06.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Sample ID : Cement Concrete for Raft

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.06.2022	20.06.2022	8.168	339.3	15.08
2	13.06.2022	20.06.2022	8.174	345.5	15.36
3	13.06.2022	20.06.2022	8.156	352.6	15.67

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 13.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client	**: Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**: Sri. K Venkatraju, Contractor, Bangalore.**
Name of the work	: Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Sample ID	: Cement Concrete for Wall
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{30}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.06.2022	13.07.2022	8.198	502.2	22.32
2	15.06.2022	13.07.2022	8.165	480.6	21.36
3	15.06.2022	13.07.2022	8.146	488.9	21.73

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-10

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 13.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.06.2022	13.07.2022	8.168	502.2	22.32
2	15.06.2022	13.07.2022	8.184	511.3	22.72
3	15.06.2022	13.07.2022	8.146	488.9	21.73

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 23.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency :**Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work :Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.06.2022	23.07.2022	8.198	388.9	17.28
2	25.06.2022	23.07.2022	8.165	379.6	16.87
3	25.06.2022	23.07.2022	8.176	368.2	16.36

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 23.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency :**Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work :Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.06.2022	23.07.2022	8.174	378.6	16.83
2	25.06.2022	23.07.2022	8.169	389.4	17.31
3	25.06.2022	23.07.2022	8.155	365.8	16.26

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-೧೦೬

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 06.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.06.2022	06.07.2022	8.168	482.6	21.45
2	29.06.2022	06.07.2022	8.159	504.2	22.41
3	29.06.2022	06.07.2022	8.146	519.3	23.08

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ನಿವೇಶನಗಳ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 06.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.06.2022	06.07.2022	8.169	500.2	22.23
2	29.06.2022	06.07.2022	8.152	513.2	22.81
3	29.06.2022	06.07.2022	8.184	484.9	21.55

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 06.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client	**: Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**: Sri. K Venkatraju, Contractor, Bangalore.**
Name of the work	: Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{30}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.06.2022	06.07.2022	8.162	488.6	21.72
2	29.06.2022	06.07.2022	8.144	496.2	22.05
3	29.06.2022	06.07.2022	8.156	505.2	22.45

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding this report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಜಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 28.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.06.2022	28.07.2022	8.169	713.2	31.70
2	30.06.2022	28.07.2022	8.188	705.2	31.34
3	30.06.2022	28.07.2022	8.172	726.4	32.28

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding this report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 28.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.06.2022	28.07.2022	8.188	715.2	31.79
2	30.06.2022	28.07.2022	8.169	724.3	32.19
3	30.06.2022	28.07.2022	8.146	732.6	32.56

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 07.07.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.06.2022	07.07.2022	8.168	500.9	22.26
2	30.06.2022	07.07.2022	8.154	513.3	22.81
3	30.06.2022	07.07.2022	9.146	489.6	21.76

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No: CACE/BBMP/KVR/W No.03/2022-23 Date : 23.06.2022

GRADATION FOR GSB (Grading V)

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

BIS Code : IS 2386 Part (1):1963
: IS 2720 part (5):1985

Date of Testing : 21.06.2022 to 23.06.2022

Oven Dry Wt (gm) : 13000

TABLE – 1

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirements as per MORTH 5th edition table 400.1
75	0	0	0.00	100	100
53	738	738	5.68	94.32	80-100
26.5	2251	2989	22.99	77.01	55-90
9.5	2185	5174	39.80	60.20	35-65
4.75	1869	7043	54.18	45.82	25-50
2.36	3658	10701	82.32	17.68	10-20
0.85	1752	12453	95.79	4.21	2-10
0.425	294	12747	98.05	1.95	0-5

Table 2

Sl. No.	Particulars	Test Results	Requirements as per MORTH 5th edition table 400.2
1	Liquid Limit, %	19.50	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Remarks: Satisfies MORTH Specifications as per Table 400-1, Grading V

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the Site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No: CACE/BBMP/KVR/W No.03/2022-23 Date : 23.06.2022

GRADATION FOR GSB (Grading V)

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

BIS Code : IS 2386 Part (1):1963
: IS 2720 part (5):1985

Date of Testing : 21.06.2022 to 23.06.2022

Oven Dry Wt (gm) : 13000

TABLE – 1

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirements as per MORTH 5th edition table 400.1
75	0	0	0.00	100	100
53	715	715	5.50	94.50	80-100
26.5	2168	2883	22.18	77.82	55-90
9.5	2045	4928	37.91	62.09	35-65
4.75	1890	6818	52.45	47.55	25-50
2.36	3768	10586	81.43	18.57	10-20
0.85	1758	12344	94.95	5.05	2-10
0.425	285	12629	97.15	2.85	0-5

Table 2

Sl. No.	Particulars	Test Results	Requirements as per MORTH 5th edition table 400.2
1	Liquid Limit, %	21.50	25.0% Maximum.
	Plasticity Index, %	Non Plastic	6.0% Maximum.

Remarks: Satisfies MORTH Specifications as per Table 400-1, Grading V

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the Site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No: CACE/BBMP/KVR/W No.03/2022-23 Date : 25.06.2022

GRADATION FOR GSB (Grading V)

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

BIS Code : IS 2386 Part (1) 1963
: IS 2720 part (5) 1985

Date of Testing : 23.06.2022 to 25.06.2022

Oven Dry Wt (gm) : 13000

TABLE – 1

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirements as per MORTH 5th edition table 400.1
75	0	0	0.00	100	100
53	721	721	5.55	94.45	80-100
26.5	2265	2986	22.97	77.03	55-90
9.5	2180	5166	39.74	60.26	35-65
4.75	1845	7011	53.93	46.07	25-50
2.36	3698	10709	82.38	17.62	10-20
0.85	1785	12494	96.11	3.89	2-10
0.425	258	12752	98.09	1.91	0-5

Table 2

Sl. No.	Particulars	Test Results	Requirements as per MORTH 5th edition table 400.2
1	Liquid Limit, %	19.00	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Remarks: Satisfies MORTH Specifications as per Table 400-1, Grading V

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the Site.
3. The specimens will be retained for [illegible] from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Savitri Nilaya, Opp. Vidya Poorna Pooja School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date :29.06.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing :29.06.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	184	184	1.8	98.2	95-100
22.4	2536	2720	27.2	72.8	60-80
11.2	2150	4870	48.7	51.3	40-60
4.75	1845	6715	67.2	32.9	25-40
2.36	1189	7904	79.0	21.0	15-30
0.600	582	8486	84.9	15.1	8-22
0.075	1232	9718	97.2	2.8	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date :30.06.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing :30.06.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	196	196	2.0	98.0	95-100
22.4	2520	2716	27.2	72.8	60-80
11.2	2152	4868	48.7	51.3	40-60
4.75	1832	6700	67.0	33.0	25-40
2.36	1185	7885	78.9	21.2	15-30
0.600	621	8506	85.1	14.9	8-22
0.075	1239	9745	97.5	2.6	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date :30.06.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing :30.06.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	185	185	1.9	98.2	95-100
22.4	2533	2718	27.2	72.8	60-80
11.2	2155	4873	48.7	51.3	40-60
4.75	1843	6716	67.2	32.8	25-40
2.36	1182	7898	79.0	21.0	15-30
0.600	578	8476	84.8	15.2	8-22
0.075	1236	9712	97.1	2.9	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

FOR CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
amaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date : 01.07.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing : 01.07.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	180	180	1.8	98.2	95-100
22.4	2555	2735	27.4	72.7	60-80
11.2	2153	4888	48.9	51.1	40-60
4.75	1843	6731	67.3	32.7	25-40
2.36	1183	7914	79.1	20.9	15-30
0.600	582	8496	85.0	15.0	8-22
0.075	1232	9728	97.3	2.7	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

FOR CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
amaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/RVR/W No.03/2022-23 Date : 01.07.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing : 01.07.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	182	182	1.8	98.2	95-100
22.4	2563	2745	27.5	72.6	60-80
11.2	2111	4856	48.6	51.4	40-60
4.75	1841	6697	67.0	33.0	25-40
2.36	1181	7878	78.8	21.2	15-30
0.600	580	8458	84.6	15.4	8-22
0.075	1230	9688	96.9	3.1	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date : 02.07.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing : 02.07.2022

Material Type : Wet Mix Macadam

Oven Dry Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	184	184	1.8	98.2	95-100
22.4	2536	2720	27.2	72.8	60-80
11.2	2150	4870	48.7	51.3	40-60
4.75	1845	6715	67.2	32.9	25-40
2.36	1189	7904	79.0	21.0	15-30
0.600	582	8486	84.9	15.1	8-22
0.075	1232	9718	97.2	2.8	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
amaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date : 02.07.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing : 02.07.2022

Material Type : Wet Mix Macadam

Oven Dry Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	199	199	2.0	98.0	95-100
22.4	2539	2738	27.4	72.6	60-80
11.2	2169	4907	49.1	50.9	40-60
4.75	1839	6746	67.5	32.5	25-40
2.36	1179	7925	79.3	20.8	15-30
0.600	629	8554	85.5	14.5	8-22
0.075	132	9786	97.9	2.1	0-5

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-560

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date :04.07.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing :04.07.2022

Material Type : Wet Mix Macadam

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	190	190	1.9	98.1	95-100
22.4	2533	2723	27.2	72.8	60-80
11.2	2166	4889	48.9	51.1	40-60
4.75	1844	6733	67.3	32.7	25-40
2.36	1188	7921	79.2	20.8	15-30
0.600	620	8541	85.4	14.6	8-22
0.075	1229	9770	97.7	2.3	0-5

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
amaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 30.06.2022

Aggregate Impact Value

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
IS Code	IS 2386 (Part 4):1963(RA 2011)
Type of Mix	Wet Mix macadam
Date of Testing	30.06.2022

Sl No.	Details	Test No. 1	Test No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	381	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	293	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.63	23.10	22.86

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%(As per MORTH Specication table 400.12)

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 02.07.2022

Aggregate Impact Value

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
IS Code	IS 2386 (Part 4):1963(RA 2011)
Type of Mix	Wet Mix macadam
Date of Testing	02.07.2022

Sl No.	Details	Test No. 1	Test No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	381	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	293	
4	Aggregate Impact value = percent fines $100^* (W_2/W_1)\%$	22.63	23.10	22.86

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%(As per MORTH Specication table 400.12)

Note:

→ This report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
amaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 29.06.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	29.06.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.20	11.50	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.70	13.10	
	Combined Flakiness & Elongation index	23.90	24.60	

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 30.06.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	30.06.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.90	12.10	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	13.20	13.60	
	Combined Flakiness & Elongation index	25.10	25.70	

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding this report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 01.07.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	01.07.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	12.10	11.90	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	13.60	13.20	
	Combined Flakiness & Elongation index	25.70	25.10	

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 04.07.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	04.07.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	12.80	12.50	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	13.20	13.70	
	Combined Flakiness & Elongation index	26.00	26.20	

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples collected at the site.

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date :29.06.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 27.06.2022 to 29.06.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	21.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 01.07.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 29.06.2022 to 01.07.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	20.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 01.07.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 29.06.2022 to 01.07.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date :02.07.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 30.06.2022 to 02.07.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	20.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date : 04.07.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 02.07.2022 to 04.07.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	20.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 04.07.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**

Agency : **Sri. K Venkatraju, Contractor, Bangalore.**

Name of Work : Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 02.07.2022 to 04.07.2022

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	22.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS
(Building Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No: CACE/BBMP/KVR/W No.03/2022-23

Date: **11.07.2022**

TEST REPORT ON PAVING BITUMEN

Client	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS Code	IS 73:2013,IS 1203:1978, IS 1208:1978, IS 1205:1978, IS1448(P-69):1969
Date of Testing	**11.07.2022**
Type of Mix	**Dense Graded Bituminous Macadam , VG 30**
Source of Location	**Hot Mix Plant**

The results of the tests conducted on the bitumen sample using for Dense Graded Bituminous Macadam

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 0C, 100gms, 5sec, 1/10 mm	51	Min 45
2	Softening point, 0C	49	Min 47
3	Ductility at 250C, cm	>100	Min40
4	Flash Point, 0C	275	Min 220

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 14.07.2022

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	:	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of the Work	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	14.07.2022

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.23	10.10	9 Kn (min)
2	Marshal flow, mm	3.66	3.79	2 – 4
3	Percent air voids in Mineral Aggregate	13.77	14.33	13 – 15
4	Voids in Compacted Mix	3.82	4.24	3 – 6
5	Percent Voids filled with Bitumen	68.89	69.55	65 - 75
6	Density, g/cc	2.23	2.27	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected at the site.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-10೯

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 15.07.2022

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	:	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of the Work	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore..
Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	15.07.2022

The results of the tests conducted on the Dense Graded Bituminous Macadam mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.25	10.12	9 Kn (min)
2	Marshal flow, mm	3.68	4.51	2 – 4
3	Percent air voids in Mineral Aggregate	13.79	14.35	13 – 15
4	Voids in Compacted Mix	3.84	4.26	3 – 6
5	Percent Voids filled with Bitumen	68.91	69.57	65 - 75
6	Density, g/cc	2.25	2.27	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected at the site.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 14.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Date of Testing	14.07.2022

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	23.00
7. Bitumen content in %	4.60	4.60
8. Average	4.60	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	35.9	35.9	7.5	92.5	90 - 100
19	72.9	108.8	22.8	77.2	71 - 95
13.2	66.8	175.6	36.8	63.2	56 - 80
4.75	83.8	259.4	54.4	45.6	38 - 54
2.360	76.5	335.9	70.4	29.6	28 - 42
0.300	96.2	432.1	90.6	9.4	7 - 21
0.075	21.2	453.3	95.0	5.0	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	36.6	36.6	7.7	92.3	90 - 100
19	73.2	109.8	23.0	77.0	71 - 95
13.2	66.1	175.9	36.9	63.1	56 - 80
4.75	83.50	259.4	54.4	45.6	38 - 54
2.360	78.2	337.6	70.8	29.2	28 - 42
0.300	91.2	428.8	89.9	10.1	7 - 21
0.075	21.2	450	94.3	5.7	2 - 8

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples collected at the site.
- Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 15.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Date of Testing	15.07.2022

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.50	23.00
7. Bitumen content in %	4.70	4.60
8. Average	4.65	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	35.9	35.9	7.5	92.5	90 - 100
19	72.9	108.8	22.8	77.2	71 - 95
13.2	64.1	172.9	36.3	63.7	56 - 80
4.75	83.7	256.6	53.9	46.1	38 - 54
2.360	77.2	333.8	70.1	29.9	28 - 42
0.300	97.8	431.6	90.6	9.4	7 - 21
0.075	22.6	454.2	95.3	4.7	2 - 8

SIEVE SIZE	Test 2				
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.10
37.5	0	0	0	100	100
26.5	36.9	36.9	7.7	92.3	90 - 100
19	73.7	110.6	23.2	76.8	71 - 95
13.2	66.8	177.4	37.2	62.8	56 - 80
4.75	84.50	261.9	54.9	45.1	38 - 54
2.360	78.6	340.5	71.4	28.6	28 - 42
0.300	98.5	439	92.0	8.0	7 - 21
0.075	22.5	461.5	96.8	3.2	2 - 8

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples collected at the site
- Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 16.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Date of Testing	16.07.2022

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.00	23.00
7. Bitumen content in %	4.60	4.60
8. Average	4.60	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	34.4	34.4	7.2	92.8	90 - 100
19	73.9	108.3	22.7	77.3	71 - 95
13.2	66	174.3	36.5	63.5	56 - 80
4.75	84	258.3	54.2	45.8	38 - 54
2.360	76	334.3	70.1	29.9	28 - 42
0.300	96.8	431.1	90.4	9.6	7 - 21
0.075	21.6	452.7	94.9	5.1	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	36.5	36.5	7.7	92.3	90 - 100
19	73.4	109.9	23.0	77.0	71 - 95
13.2	66.8	176.7	37.0	63.0	56 - 80
4.75	84.50	261.2	54.8	45.2	38 - 54
2.360	78.6	339.8	71.2	28.8	28 - 42
0.300	98.5	438.3	91.9	8.1	7 - 21
0.075	23.4	461.7	96.8	3.2	2 - 8

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples collected at the site.
- Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 14.07.2022

Aggregate Gradation Test

IS : 2386 Part I

Client	**Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.**
Agency	**Sri. K Venkatraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
BIS Code	IS 2386(Part 1):1963
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	14.07.2022

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	416	8.32	8.32	91.68	90 - 100	
9.5	475	9.50	17.82	82.18	70 - 88	
4.75	640	12.80	30.62	69.38	53 - 71	
2.36	687	13.74	44.36	55.64	42 - 58	
1.18	521	10.42	54.78	45.22	34 - 48	
0.600	548	10.96	65.74	34.26	26 - 38	
0.300	491	9.82	75.56	24.44	18 - 28	
0.150	367	7.34	82.90	17.10	12 - 20	
0.075	489	9.78	92.68	7.32	4 - 10	

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	420	8.40	8.40	91.60	90 - 100	
9.5	549	10.98	19.38	80.62	70 - 88	
4.75	682	13.64	33.02	66.98	53 - 71	
2.36	533	10.66	43.68	56.32	42 - 58	
1.18	559	11.18	54.86	45.14	34 - 48	
0.600	546	10.92	65.78	34.22	26 - 38	
0.300	682	13.64	79.42	20.58	18 - 28	
0.150	198	3.96	83.38	16.62	12 - 20	
0.075	482	9.64	93.02	6.98	4 - 10	

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory.
- The above tested results are based on the samples collected at the site.
- Any discrepancy must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Subhas Bhavan, Opp: Vidya Poorna Pooja School, Ramaiah Layout, Nagasandra, Bangalore - 560 073.

Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 18.07.2022

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	:	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of the Work	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	18.07.2022

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	10.23	9.54	9 Kn (min)
2	Marshal flow, mm	3.65	2.34	2 – 4
3	Percent air voids in Mineral Aggregate	13.43	14.55	13 – 15
4	Voids in Compacted Mix	3.71	4.5	3 – 6
5	Percent Voids filled with Bitumen	70.4	71..10	65 - 75
6	Density, g/cc	2.23	2.26	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected at the site.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23 Date: 18.07.2022

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	:	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of the Work	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	18.07.2022

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.48	9.95	9 Kn (min)
2	Marshal flow, mm	3.12	2.97	2 – 4
3	Percent air voids in Mineral Aggregate	13.22	14.35	13 – 15
4	Voids in Compacted Mix	3.63	4.66	3 – 6
5	Percent Voids filled with Bitumen	69.29	68.25	65 - 75
6	Density, g/cc	2.25	2.25	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected at the site.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date: 20.07.2022

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** Yelahanka New Town Sub division, BBMP, Bangalore.
Agency	:	**Sri. K Venkatraju,** Contractor, Bangalore.
Name of the Work	:	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	20.07.2022

The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.63	10.87	9 Kn (min)
2	Marshal flow, mm	2.79	2.96	2 – 4
3	Percent air voids in Mineral Aggregate	13.62	14.57	13 – 15
4	Voids in Compacted Mix	3.83	4.20	3 – 6
5	Percent Voids filled with Bitumen	69.43	70.17	65 - 75
6	Density, g/cc	2.25	2.26	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples collected at the site.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಎಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ ಬಿ ಎಂ ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 18.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	Sri. K Venkatraju, Contractor, Bangalore.
NAME OF THE WORK	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	18.07.2022

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473	473
3. Weight of Asphalt and Mineral matter Extracted, g	27	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27	27
7. Bitumen content in %	5.40	5.40
8. Average	5.40	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	13.8	13.8	2.9	97.1	90 - 100
9.5	65.8	79.6	16.8	83.2	70 - 88
4.75	90.3	169.9	35.9	64.1	53 - 71
2.36	46.2	216.1	45.7	54.3	42 - 58
1.18	35.8	251.9	53.3	46.7	34 - 48
0.600	55.3	307.2	64.9	35.1	26 - 38
0.300	42.8	350	74.0	26.0	18 - 28
0.150	34.9	384.9	81.4	18.6	12 - 20
0.075	42.8	427.7	90.4	9.6	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	14.9	14.9	3.2	96.8	90 - 100
9.5	66.2	81.1	17.1	82.9	70 - 88
4.75	92.8	173.9	36.8	63.2	53 - 71
2.36	45.3	219.2	46.3	53.7	42 - 58
1.18	48.2	267.4	56.5	43.5	34 - 48
0.600	56.3	323.7	68.4	31.6	26 - 38
0.300	45.8	369.5	78.1	21.9	18 - 28
0.150	37.9	407.4	86.1	13.9	12 - 20
0.075	32.6	440.0	93.0	7.0	4 - 10

Note:

- This test report shall not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples collected at the site.
- Any discrepancy in this report must be reported within 30 days from the date of testing

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 18.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	Sri. K Venkatraju, Contractor, Bangalore.
NAME OF THE WORK	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	18.07.2022

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472	473
3. Weight of Asphalt and Mineral matter Extracted, g	28	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	28	27
7. Bitumen content in %	5.60	5.40
8. Average	5.50	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	13.9	13.9	2.9	97.1	90 - 100
9.5	65.6	79.5	16.8	83.2	70 - 88
4.75	90.5	170	36.0	64.0	53 - 71
2.36	46.5	216.5	45.9	54.1	42 - 58
1.18	36	252.5	53.5	46.5	34 - 48
0.600	55.9	308.4	65.3	34.7	26 - 38
0.300	43	351.4	74.4	25.6	18 - 28
0.150	35.1	386.5	81.9	18.1	12 - 20
0.075	43.1	429.6	91.0	9.0	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	15.1	15.1	3.2	96.8	90 - 100
9.5	66	81.1	17.1	82.9	70 - 88
4.75	92.6	173.7	36.7	63.3	53 - 71
2.36	45.1	218.8	46.3	53.7	42 - 58
1.18	48.1	266.9	56.4	43.6	34 - 48
0.600	56.1	323	68.3	31.7	26 - 38
0.300	45.6	368.6	77.9	22.1	18 - 28
0.150	38.5	407.0	86.1	13.9	12 - 20
0.075	31.6	438.7	92.7	7.3	4 - 10

Note:

- This test report shall not be reproduced except in full, without written approval of the laboratory.
- The results mentioned above are based on the tests carried out on the samples collected at the site.
- Any Objection regarding the Report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 19.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	Sri. K Venkatraju, Contractor, Bangalore.
NAME OF THE WORK	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	19.07.2022

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	27
7. Bitumen content in %	5.50	5.40
8. Average	5.45	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14.2	14.2	3.0	97.0	90 - 100
9.5	66.2	80.4	17.0	83.0	70 - 88
4.75	91.3	171.7	36.3	63.7	53 - 71
2.36	45.9	217.6	46.1	53.9	42 - 58
1.18	36.1	253.7	53.7	46.3	34 - 48
0.600	55.9	309.6	65.5	34.5	26 - 38
0.300	43.1	352.7	74.6	25.4	18 - 28
0.150	35.1	387.8	82.1	17.9	12 - 20
0.075	41.5	429.3	90.9	9.1	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14.5	14.5	3.1	96.9	90 - 100
9.5	65.9	80.4	17.0	83.0	70 - 88
4.75	92.5	172.9	36.6	63.4	53 - 71
2.36	45.9	218.8	46.3	53.7	42 - 58
1.18	48.9	267.7	56.6	43.4	34 - 48
0.600	56.9	324.6	68.6	31.4	26 - 38
0.300	47.1	371.7	78.6	21.4	18 - 28
0.150	38.1	409.8	86.6	13.4	12 - 20
0.075	31.5	441.3	93.3	6.7	4 - 10

Note:

a This test report should not be reproduced except in full, without written approval of the laboratory.

b The results indicated above are based on the tests carried out on the sample(s) collected at the site.

c Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Vidia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CAC/[illegible]/2022-23 Dated: 19.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	Sri. K Venkatraju, Contractor, Bangalore.
NAME OF THE WORK	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	19 07 2022

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	27
7. Bitumen content in %	5.50	5.40
8. Average	5.45	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	13.7	13.7	2.9	97.1	90 - 100
9.5	64.9	78.6	16.6	83.4	70 - 88
4.75	91.3	169.9	36.0	64.0	53 - 71
2.36	48.2	218.1	46.2	53.8	42 - 58
1.18	36.8	254.9	53.9	46.1	34 - 48
0.600	57.6	312.5	66.1	33.9	26 - 38
0.300	43.3	355.8	75.3	24.7	18 - 28
0.150	35.9	391.7	82.9	17.1	12 - 20
0.075	40.1	431.8	91.4	8.6	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	13.9	13.9	2.9	97.1	90 - 100
9.5	65.2	79.1	16.7	83.3	70 - 88
4.75	92.1	171.2	36.2	63.8	53 - 71
2.36	45.1	216.3	45.7	54.3	42 - 58
1.18	48.9	265.2	56.1	43.9	34 - 48
0.600	56	321.2	67.9	32.1	26 - 38
0.300	44.8	366	77.4	22.6	18 - 28
0.150	37.1	403.1	85.2	14.8	12 - 20
0.075	31.6	434.7	91.9	8.1	4 - 10

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples collected at the site.
- Any Query regarding this report must be reported within 30 days from the date of testing

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com

CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/KVR/W No.03/2022-23

Date : 20.07.2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.
AGENCY	Sri. K Venkatraju, Contractor, Bangalore.
NAME OF THE WORK	Restoration and Improvements of Roads at Hesaraghatta main road, G Ramaiah Layout Sai Archade Layout Vijaya Bank Layout Adityanagara phase-02 and surrounding areas in ward no-03 of Yelahanka New Town Sub division, BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	20.07.2022

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	472
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	28
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	28
7. Bitumen content in %	5.50	5.60
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14	14	3.0	97.0	90 - 100
9.5	69.3	83.3	17.6	82.4	70 - 88
4.75	93.9	177.2	37.5	62.5	53 - 71
2.36	43.5	220.7	46.7	53.3	42 - 58
1.18	38.2	258.9	54.8	45.2	34 - 48
0.600	39.2	298.1	63.1	36.9	26 - 38
0.300	46.3	344.4	72.9	27.1	18 - 28
0.150	36.2	380.6	80.6	19.4	12 - 20
0.075	46.9	427.5	90.5	9.5	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14.6	14.6	3.1	96.9	90 - 100
9.5	61.8	76.4	16.2	83.8	70 - 88
4.75	91.1	167.5	35.5	64.5	53 - 71
2.36	46.3	213.8	45.3	54.7	42 - 58
1.18	43.1	256.9	54.4	45.6	34 - 48
0.600	52.1	309	65.5	34.5	26 - 38
0.300	49.8	358.8	76.0	24.0	18 - 28
0.150	35.8	394.6	83.6	16.4	12 - 20
0.075	40.2	434.8	92.1	7.9	4 - 10

Note:

1. This test report should not be reproduced except in full, without written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected at the site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

No. 01, Satvika Nilaya, Opp. Widia Poorna Prajna School,
Ramaiah Layout, Nagasandra, Bangalore - 560 073.
Ph: 9591618639, GSTIN: 29CNWPD9510K1ZB, Email: civilaimconsultants@gmail.com